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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/811,790 | 03/29/2004 | Shinichiro Watanabe | 81754.0121 | 9491 |

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| EXAMINER | |
|---|---|
| LAU, HOI CHING | |
| **ART UNIT** | **PAPER NUMBER** |
| 2636 | |

DATE MAILED: 03/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/811,790 | WATANABE, SHINICHIRO | |
| | Examiner | Art Unit | |
| | Hoi C. Lau | 2636 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *09 January 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *29 March 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

## DETAILED ACTION

1. Claims 1- 20 have been examined.

### *Claim Objections*

2. Claim 1 is objected to because of the following informalities:

There should be – to – insert between "discharging" and "the secondary battery" in claim 1, lines 5 and 6 to clarify the limitation.

Appropriate correction is required.

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1, 5-8, 10-11, 14, and 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyamoto (GB 2292866).

Rectifier (18) for rectifying an induced electromotive force caused by bringing an antenna coil into close proximity to a reader/writer (external device) to generate a rectified voltage (page 2, lines 1-6 and page 12, lines1-18);

a secondary battery (1) (page 18, lines 1-5); and

charging circuit for being charged according to the rectified voltage and for discharging to the secondary battery (page 18, lines 1-20)

wherein the means for charging includes a capacitor that stores a charge according to the rectified voltage (page 18, lines 1-20).

It fails to clearly mention a physical resistor through the capacitor for supplies a discharge voltage to battery.

However, it would have been obvious to one of ordinary skill in the art the wire (11a) of Figure 4 has inherent resistance/impedance resulting in V, I, R, parameters to facilitate the intended charging operation and function in Miyamoto's teaching. Furthermore, it would have been obvious to one of ordinary skill in the art that if resistance higher than what the wire can inherent provide for the charging/discharging operation as intended, a resistor can be added with wire (11a).

As to **claim 5**, it would have been obvious to one of ordinary skill in the art the components of Miyamoto are constructed by electronic circuit (figures 1-4) because any conventional circuit is constructed with electronic components.

As to **claim 6**, it teaches a transceiving device for data communication with the reader/writer (external device) (page 7, lines 21-28).

As to **claim 7**, it teaches the transceiving device includes the antenna coil 16 (page 12, lines 1-7).

As to **claim 8**, it is teaches the transceiving device includes a resonance circuit (page 12, lines 1-7).

As to **claim 10**, it teaches the use of a secondary battery (1).

It would have been obvious to one of ordinary skill in the art any conventional battery is included an internal resistance within the component where any components or materials have resistance consider as resistor.

As to claim 11, it teaches a power supply controller (14) able to detect a drops in the voltage which supply by the rectifier (page 15, lines 16-28).

Regarding **Claim 14**, it is a claim corresponding to apparatus claim 1, and it is therefore rejected for the similar reasons set forth in the rejection of claim 1, supra.

As to **Claim 18**, it is a claim corresponding to apparatus claim 6, and it is therefore rejected for the similar reasons set forth in the rejection of claim 6, supra.

As to **Claim 19**, it is a claim corresponding to apparatus claim 7, and it is therefore rejected for the similar reasons set forth in the rejection of claim 7, supra.

Regarding **Claim 20**, it is a method claim corresponding to apparatus claim 1, and it is therefore rejected for the similar reasons set forth in the rejection of claim 1, supra.

4. Claims 2 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyamoto (GB 2292866) in view of Graham (U.S. 6,424,125).

As to **claim 2**, Miyamoto's meets the limitation of claims except it fails to clearly state the resistor acting as a time constant resistor and a diode that

prevents the charge charged in the capacitor form flowing to a portion other than the secondary battery.

Graham's device teaches the use of a time constant resistor for discharge circuit (figure 2 and 3 and column 3, lines 14-19).

It would have been obvious to one of ordinary skill in the art any circuit design as a RC circuit would easily function as a time constant components where it could modified as a charging or discharging circuit in term of increase the efficiency of the process.

Further, Graham also teaches a diode is correlated with circuitry to prevent a negative potential from capacitor (column 3, lines 48-55).

It would have been obvious to one of ordinary skill in the art to combine the polarity prevention by use of diode taught by Graham with charging/discharging circuit taught by Miyamoto because it would limited the polarity of the flow of current and voltage which depended on the displacement of the diode to prevent the negative potential to break the circuit.

As to **Claim 15**, it is a claim corresponding to apparatus claim 2, and it is therefore rejected for the similar reasons set forth in the rejection of claim 2, supra.

5. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Miyamoto (GB 2292866) in view of Walton (U.S. 4,384,288).

As to **claim 9**, Miyamoto's device teaches a secondary battery (1 and 13).

It fails to show the battery is a paper type battery.

Walton's device teaches the battery is a paper type battery (column 1, lines 67-68).

It would have been obvious to one of ordinary skill in the art to implement a paper type battery into Miyamoto's device because it would minimize the size of the component and end product.

6. Claims 12 and 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Miyamoto (GB 2292866) in view of Eberhardt (U.S. 6,404,339).

As to **claims 12 and 13**, the combination meets all the limitation of claims except it fails to show an electrophoretic display wherein display includes a writing voltage, current and a display holding time.

Eberhardt's device teaches an electophoretic display with the RFID tag (column 3, lines 55-56 and column 9, lines 49-51).

It would have been obvious to one of ordinary skill in the art to easily to implement a an electophoretic display into Miyamoto's device since Miyamoto's device already includes a processor and memory because it would provide visual signals indicative of tag operating states.

It would have been obvious to one of ordinary skill in the art to display any information on the display, including without limitation, a writing voltage, current and a display holding time because it would be a arbitrate decision from the manufacture.

7. Claims 3 and 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Miyamoto (GB 2292866) in view of Graham (U.S. 6,424,125), in further view of Busser (U.S. 6,011,488).

As to **claim 3**, the combination meets all the limitation of claims, except it fails to show the capacitor is a device serving as an electric double-layer capacitor.

Busser's device teaches the capacitor is a device serving as an electric double-layer capacitor (column 3, lines 21-33).

It would have been obvious to one of ordinary skill in the art to implement a double-layer capacitor into Miyamoto's device because double-layer capacitor is smaller in size but larger in capacitance than the conventional capacitor while quickly charged and of supplying a regulated voltage to a load.

As to **Claim 16**, it is a claim corresponding to apparatus claim 3, and it is therefore rejected for the similar reasons set forth in the rejection of claim 3, supra.

8. Claims 4 and 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Miyamoto (GB 2292866) in view of Graham (U.S. 6,424,125), in further view of Busser (U.S. 6,011,488).

As to **claim 4**, the combination meets all the limitation of claims, except it fails to show the diode is defined as a first diode and the capacitor is defined as a first capacitor, and

the means for charging and discharging further comprises:

a second diode connected in series to the first diode; and

a second capacitor connected in parallel to the first capacitor between the first diode and the second diode, and the second capacitor has a smaller capacitance than the first capacitor.

Busser's device a circuit (4) comprises:

first diode and a first capacitor, and

a second diode connected in series to the first diode; and

a second capacitor connected in parallel to the first capacitor between the first diode and the second diode, and the second capacitor has a smaller capacitance than the first capacitor (figure 5 and 6 and column 4, line 65).

It would have been obvious to one of ordinary skill in the art to modify or design the circuit with the similar arrangement because it would increase the voltage multiplication ratio for the specific needs in order to fit with the intended use.

As to **Claim 17**, it is a claim corresponding to apparatus claim 4, and it is therefore rejected for the similar reasons set forth in the rejection of claim 4, supra.

***Conclusion***

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a) Nakane et al. (U.S. 2002/0153997) "Semiconductor integrated circuit".

b) Yamaguchi (U.S. 6,747,548) "Non-contact IC card system and ...".

c) Goto (U.S. 6,079,622) "Non-contact information storage medium...".

d) Hayashi et al. (U.S. 2001/0000659) "Reader and/or writer apparatus...".

e) Yokota et al. (U.S. 6,011,958) "No-battery information storage medium...".

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hoi C. Lau whose telephone number is (571)272-8547. The examiner can normally be reached on M- F 8:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Hofsass can be reached on (571)272-2981. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Art 2636

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